## $\begin{array}{c} {\rm rCAT~v0.1} \\ {\rm Relational~Character~Analysis~Tool} \end{array}$

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	/Users/Florian 1/Applications/Source_Tree/web-rcat/flask_app/data_user/36b
$600308993272_t emp_folder/network.pdf$	

Figure 1: Network

### 1 Data Input

#### **Statistics**

• timestamp: 2018-02-27 17:44:29

• length of text: 313533 tokens

• number of characters (with at least one degree): 17

#### Input parameters

- distance measure: 10
- context measure 1 (words before Character 1): 8
- context measure 2 (words after Character 2): 8

#### 2 Network Parameters

Here you can get information about the network parameters.

#### **Definitions**

- Average degree: The degree of a node is the number of edges connected to it. It measures the number of connections to other characters. Average degree is calculated on a probability of two nodes being connected.
- SD degree: Standard deviation of all degrees.
- Density: Graph density is the ratio of the number of edges to the number of possible edges.
- Weighted degree: Sum of weights of incident edges. Measures the number of interactions of a character.

#### Current network parameters

 $\bullet$  average degree: 6.235294117647059

• sd degree: 3.011009211309098

• density: 0.3897058823529412

#### **Degrees**

Character (Node)	degree	weighted degree
Hans Castorp	14	455
Settembrini	10	233
Naphta	5	125
Madame Chauchat	6	80
Peeperkorn	5	53
Ziemßen	4	33
Behrens	5	40
Krokowski	4	41
Stöhr	10	37
Mylendonk	3	7
Pribislav Hippe	2	14
Albin	6	16
Kleefeld	8	31
Levi	7	20
Salomon	5	6
Wehsal	8	59
Wenzel	4	4

### Weights for Edges

Character Pair (Edge)	Weight
Hans Castorp Settembrini	149
Hans Castorp Naphta	44
Hans Castorp Madame Chauchat	67
Hans Castorp Peeperkorn	42
Hans Castorp Ziemßen	28
Hans Castorp Behrens	26
Hans Castorp Krokowski	30
Hans Castorp Stöhr	8
Hans Castorp Mylendonk	4
Hans Castorp Pribislav Hippe	12
Hans Castorp Kleefeld	10
Hans Castorp Levi	2
Hans Castorp Salomon	2
Hans Castorp Wehsal	31
Settembrini Naphta	65
Settembrini Peeperkorn	1
Settembrini Ziemßen	1
Settembrini Behrens	3
Settembrini Krokowski	3
Settembrini Krokowski Settembrini Stöhr	
	1
Settembrini Mylendonk	1
Settembrini Wehsal	8
Settembrini Wenzel	1
Naphta Madame Chauchat	1
Naphta Peeperkorn	4
Naphta Wehsal	11
Madame Chauchat Peeperkorn	5
Madame Chauchat Mylendonk	2
Madame Chauchat Pribislav Hippe	2
Madame Chauchat Kleefeld	3
Peeperkorn Wehsal	1
Ziemßen Behrens	3
Ziemßen Stöhr	1
Behrens Krokowski	7
Behrens Stöhr	1
Krokowski Kleefeld	1
Stöhr Albin	6
Stöhr Kleefeld	7
Stöhr Levi	9
Stöhr Salomon	1
Stöhr Saiomon Stöhr Wehsal	2
Stöhr Wensel	1
Albin Kleefeld	4
Albin Levi	2
Albin Salomon	1
Albin Wehsal	2
Albin Wenzel	1
Kleefeld Levi	3
Kleefeld Salomon	1
Kleefeld Wehsal	2
Levi Salomon	1
Levi Wehsal	2
Levi Wenzel	1

# 3 Word Cloud for single characters (method: most frequent contexts words

These word clouds were constructed based on most frequent words. They show the most frequent words that appear around character mention.

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 $600308993272_temp_folder/wordcloud_for_single_character0.png$ 

Figure 2: word cloud of "Hans Castorp"

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 $600308993272_t emp_folder/wordcloud_for_single_character 1.png$ 

Figure 3: word cloud of "Settembrini"

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 $600308993272_t emp_folder/wordcloud_for_single_character 2.png$ 

Figure 4: word cloud of "Naphta"

# 4 Word Cloud for character pairs (method: most frequent contexts words

These word clouds were constructed based on most frequent words. They show the most frequent words that appear in the context of the character pair.

 $1/\mathrm{Applications/Source}_{T} ree/web - rcat/flask_app/data_user/36bf6974 - 1bdd - 11e8 - af65 - af$ 



 $600308993272_t emp_folder/wordcloud0.png$ 

Figure 5: word cloud of "Hans Castorp -- Settembrini"

 $600308993272_t emp_folder/wordcloud2.png$ 

Figure 6: word cloud of "Hans Castorp -- Madame Chauchat"

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 $600308993272_t emp_folder/wordcloud17.png$ 

Figure 7: word cloud of "Settembrini -- Naphta"

#### rCat, v.0.1

This program is developed by Florian Barth and Evgeny Kim with the help of Roman Klinger and Sandra Murr. It is part of the Center for Reflected Text Analytics (CRETA) at the University of Stuttgart.

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